

```
graph TD; C100[CUSTOMER DEVICE 100] --- BUS; C101[CUSTOMER DEVICE 101] --- BUS; C102[CUSTOMER DEVICE 102] --- BUS; BUS --- C200[CONTROLLER 200]; C200 --- BUS2; BUS2 --- R300[RETAILER DEVICE 300]; BUS2 --- R301[RETAILER DEVICE 301]; BUS2 --- R302[RETAILER DEVICE 302]; R300 --- RD401[REDEMPTION DEVICE 401]; R301 --- RD411[REDEMPTION DEVICE 411]; R302 --- RD421[REDEMPTION DEVICE 421];
```

The diagram illustrates a system architecture with a central **CONTROLLER 200**. It is connected to three **CUSTOMER DEVICE** units (100, 101, 102) at the top. Below the controller, it connects to three **RETAILER DEVICE** units (300, 301, 302). Each retailer device is further connected to a corresponding **REDEMPTION DEVICE** (401, 411, 421). A curved arrow labeled 10 points towards the top right corner of the diagram.

FIG. 1A

20

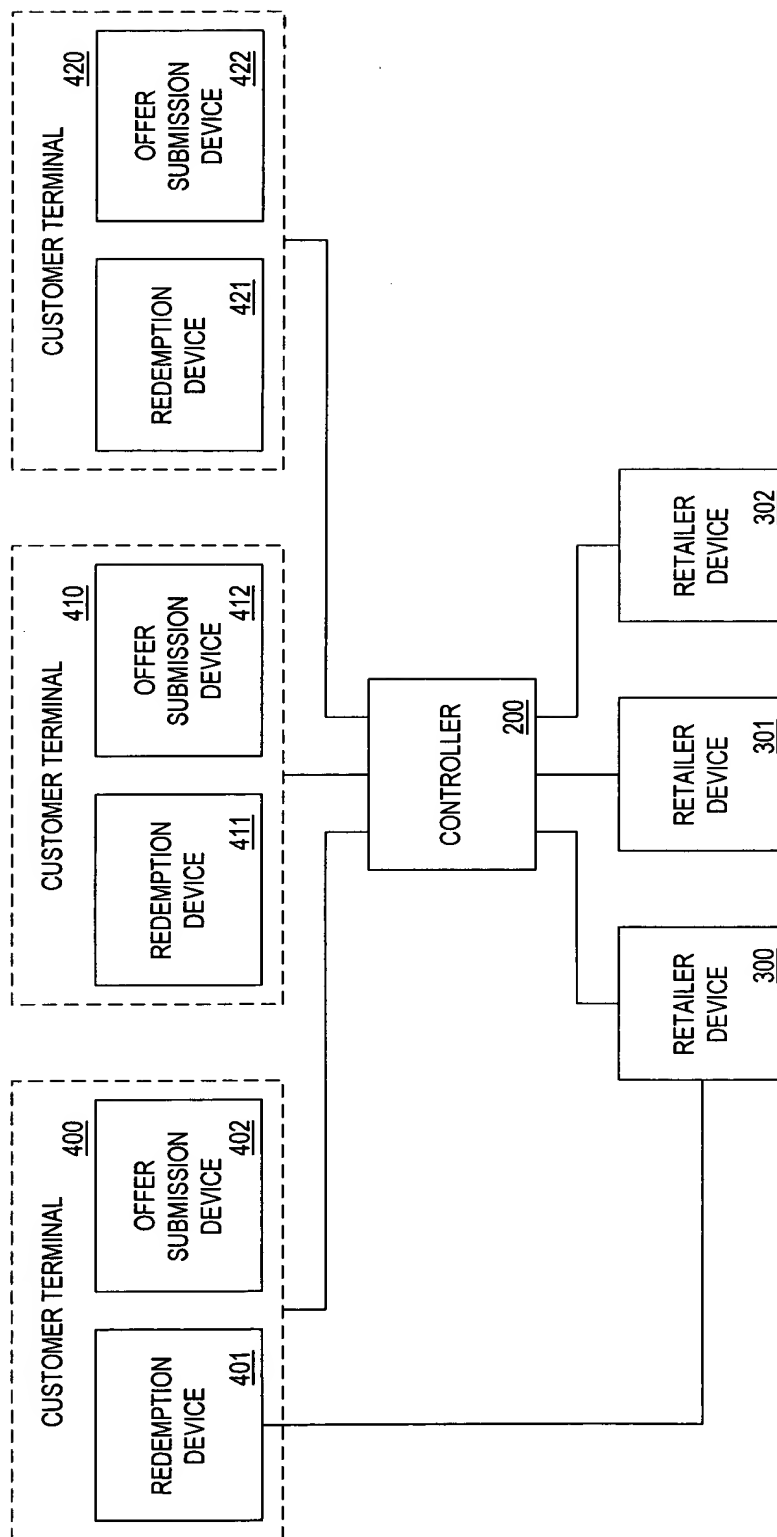
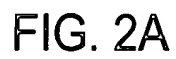


FIG. 1B

200



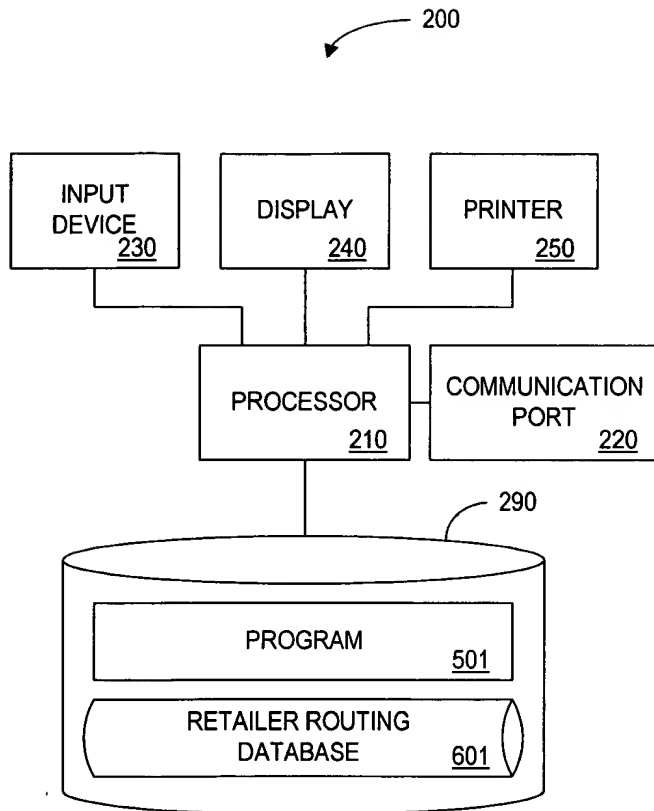


FIG. 2B

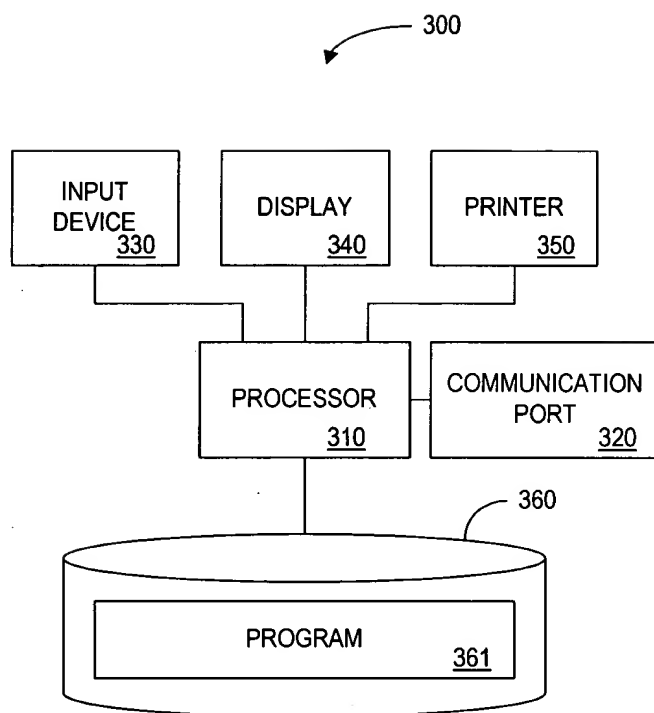


FIG. 4A

OFFER SUBMISSION DEVICE

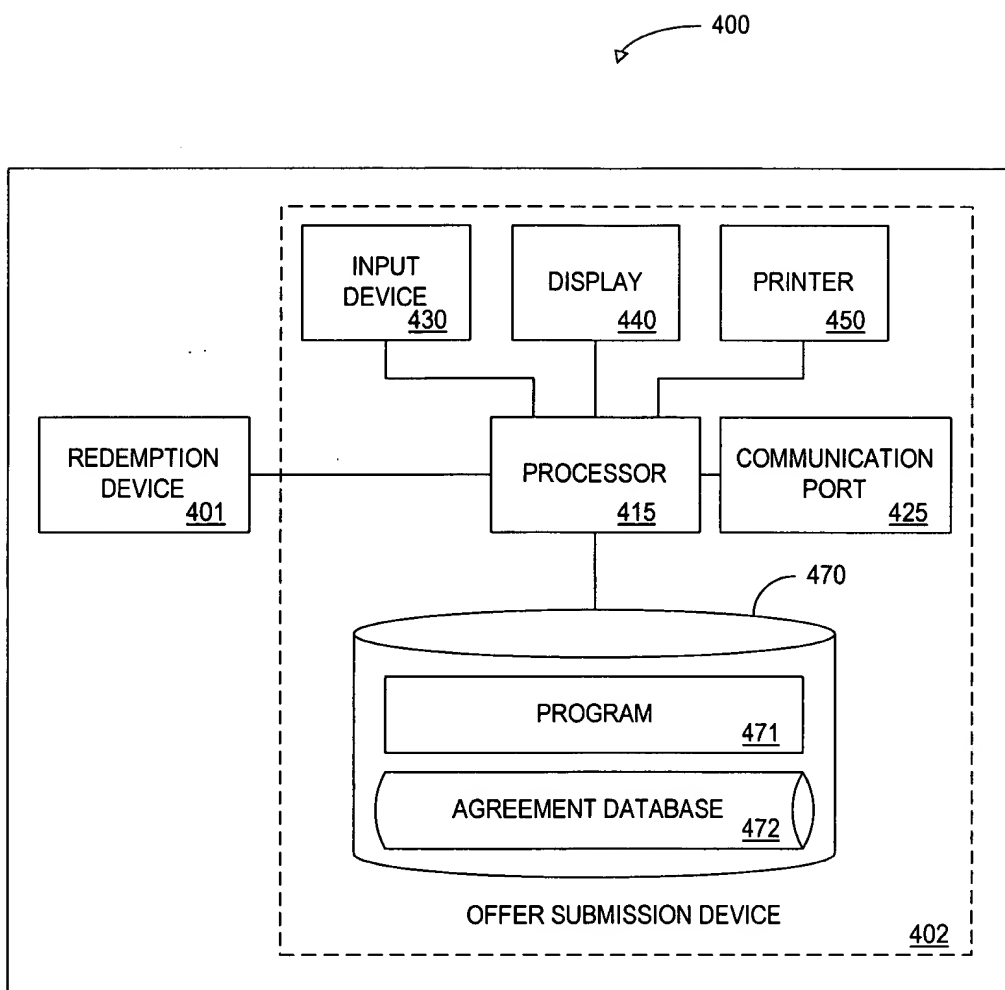


FIG. 5

600

RETAILER IDENTIFIER 610	LOCATION 620	MANUFACTURER 630	RETAIL PRICE (87) 640	RETAIL PRICE (89) 650	RETAIL PRICE (92) 660
R-0001	123 MAIN ST. STAMFORD, CT 06905	EXXON	\$1.50/GALLON	\$1.70/GALLON	--
R-0002	460 CENTER AVE. GREENWICH, CT 06700	MOBIL	\$1.50/GALLON	\$1.64/GALLON	\$1.75/GALLON
R-0003	789 MILLS LN. NORWALK, CT 06850	SHELL	\$1.45/GALLON	--	--

FIG. 6

700

RETAILER IDENTIFIER <u>710</u>	PRODUCT <u>720</u>	MINIMUM AGREEMENT PRICE <u>730</u>	MINIMUM AGREEMENT QUANTITY <u>740</u>
R-0001	87	90% OF RETAIL PRICE	50 GALLONS
R-0002	89	PRICE FOR 87	40 GALLONS
R-0003	87	\$1.30 /GALLON	---

FIG. 7

800

RETAILER IDENTIFIER <u>810</u>	SETTLEMENT PRICE <u>820</u>	SETTLEMENT SCHEDULE <u>830</u>	COMMISSION FEE <u>840</u>
R-0001	RETAIL PRICE	MIDNIGHT	\$5/AGREEMENT
R-0002	AGREEMENT PRICE	BEGINNING OF EACH AGREEMENT	---
R-0003	95% OF RETAIL PRICE	EVERY 500 GALLONS REDEEMED	\$100 FOR EVERY 1000 GALLONS REDEEMED
R-0004	RETAIL PRICE - \$0.15/GALLON	AT REDEMPTION	---

FIG. 8

SUBSIDY IDENTIFIER <u>910</u>	SUBSIDY PROVIDER <u>920</u>	OBLIGATION <u>930</u>	SUBSIDY AMOUNT <u>940</u>
SUB 01	VISA	APPLY FOR A GOLD CARD	\$30
SUB 02	MCI	SWITCH LONG DISTANCE SERVICE	\$20
SUB 03	MCDONALD'S	BUY FROM THE MCDONALD'S ON THE CORNER EVERY WEEK	\$15

900

1000

REDEMPTION CODE	REDEMPTION CONDITION
<u>1010</u>	<u>1020</u>
C1	MUST REDEEM AT LEAST ONCE A MONTH
C2	MUST REDEEM ON WEEKDAYS BETWEEN 2 AND 4 PM
C3	MUST ALWAYS USE SELF SERVICE

FIG. 10

1100

NAME 1110	CUSTOMER IDENTIFIER 1120	CREDIT CARD NUMBER 1130	CONTACT INFORMATION 1140	SUBSIDY CODE 1150	BIND NEXT OFFER FLAG 1160
ALICE BROWN	CUST 001	1234-5678- 9101-1121	203-333-4444	SUB 01	YES
CHARLIE DOE	CUST 002	1111-2222- 3333-4444	CD@ EMAIL.NET	SUB 02	NO
EVAN FIELD	CUST 003	3141-5926- 5358-9793	123 MAIN ST. ANYTOWN, USA	SUB 03	NO

FIG. 11

1200

REDEMPTION IDENTIFIER 1210	CUSTOMER IDENTIFIER 1220	PRODUCT 1230	AGREEMENT PRICE 1240	RETAILER IDENTIFIER 1250	QUANTITY REMAINING 1260	REDEMPTION CODE 1270
RED 0015	CUST 001	89	80% OF RETAIL PRICE	R-0001	50 GALLONS	C1
RED 0024	CUST 002	87	\$1.45/GALLON	R-0002	3 GALLONS	C2
RED 0036	CUST 003	92	\$50 FOR 30 GALLONS	R-0003 R-0004	25 GALLONS	C3

FIG. 12

[illegible]

R-0001			
CUSTOMER IDENTIFIER	PRODUCT	QUANTITY REDEEMED	RETAIL PRICE
<u>1320</u>	<u>1330</u>	<u>1340</u>	<u>1350</u>
CUST 888	87	15 GALLONS	\$1.50 PER GALLON
CUST 001	89	20 GALLONS	\$1.65 PER GALLON
CUST 999	92	7.5 GALLONS	\$1.75 PER GALLON

FIG. 13

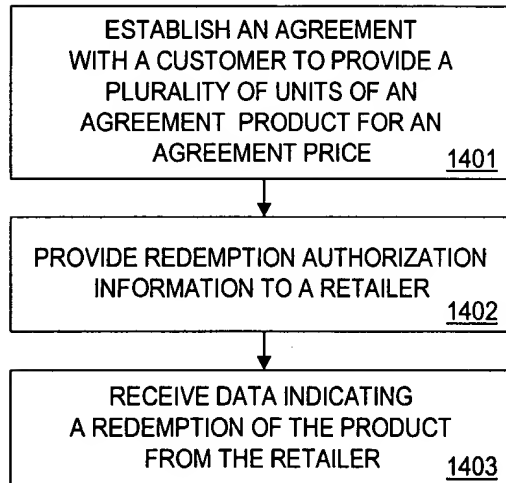


FIG. 14

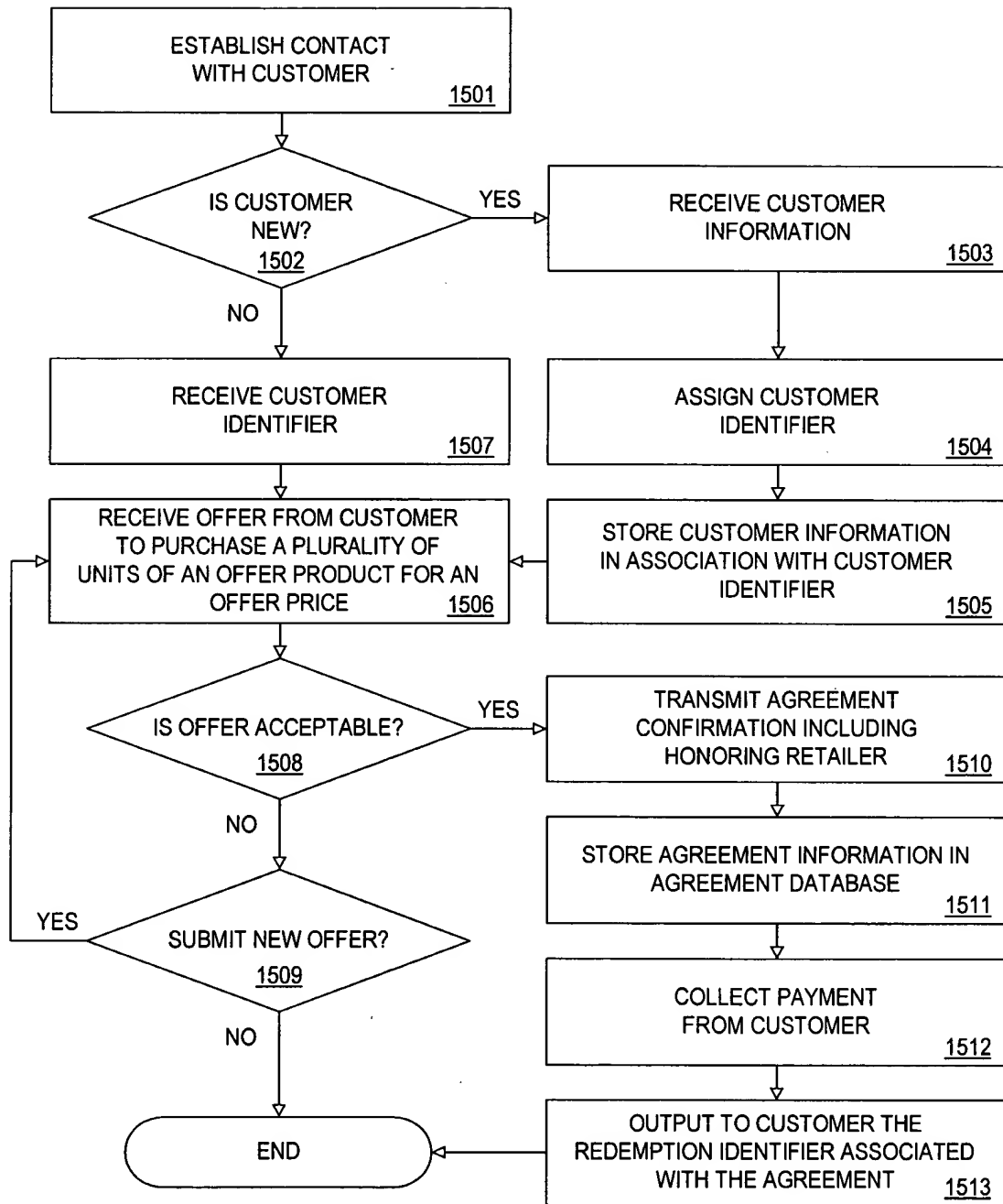


FIG. 15

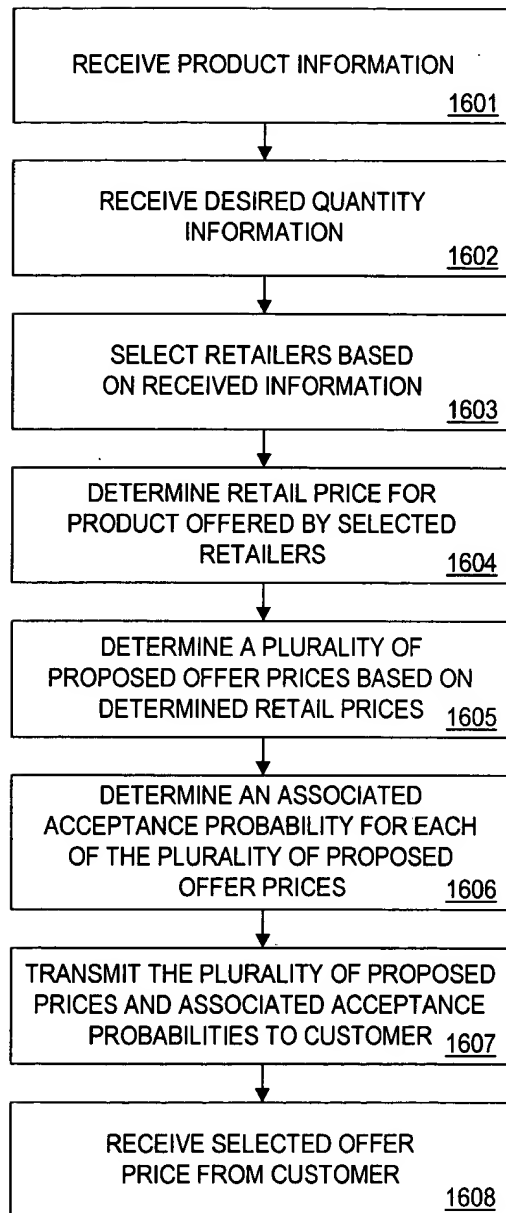


FIG. 16

ONE ACCEPTED OFFER	
AMOUNT LESS THAN AVERAGE RETAIL PRICE	ASSOCIATED ACCEPTANCE PROBABILITY
\$0.05	98%
\$0.10	96%
\$0.12	90%
\$0.15	80%

ZERO ACCEPTED OFFERS	
AMOUNT LESS THAN AVERAGE RETAIL PRICE	ASSOCIATED ACCEPTANCE PROBABILITY
\$0.05	100%
\$0.10	100%
\$0.12	100%
\$0.15	100%

FIG. 17

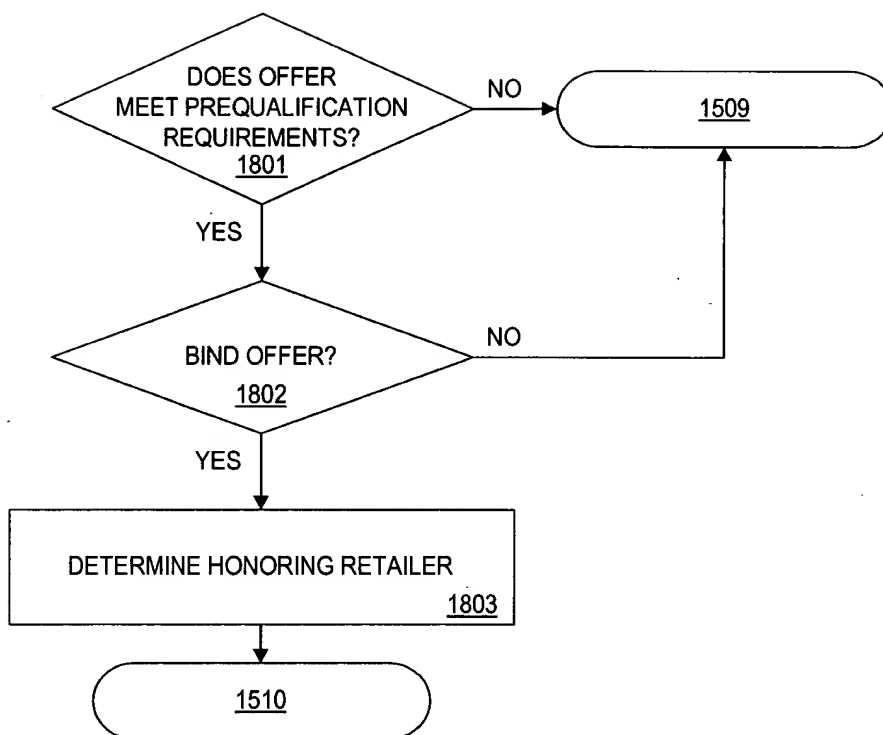



FIG. 18



1900

MANUFACTURER	% TARGET MARKET SHARE	% ACTUAL MARKET SHARE	% DIFFERENCE
<u>1910</u>	<u>1920</u>	<u>1930</u>	<u>1940</u>
EXXON	25%	20%	-5
MOBIL	20%	22%	2
SHELL	30%	35%	5

FIG. 19A

1950

EXXON – 89 OCTANE	
RETAILER IDENTIFIER <u>1960</u>	TIER <u>1970</u>
R-0001	LOW
R-0004	LOW
R-0007	MEDIUM
R-0010	LOW

FIG. 19B

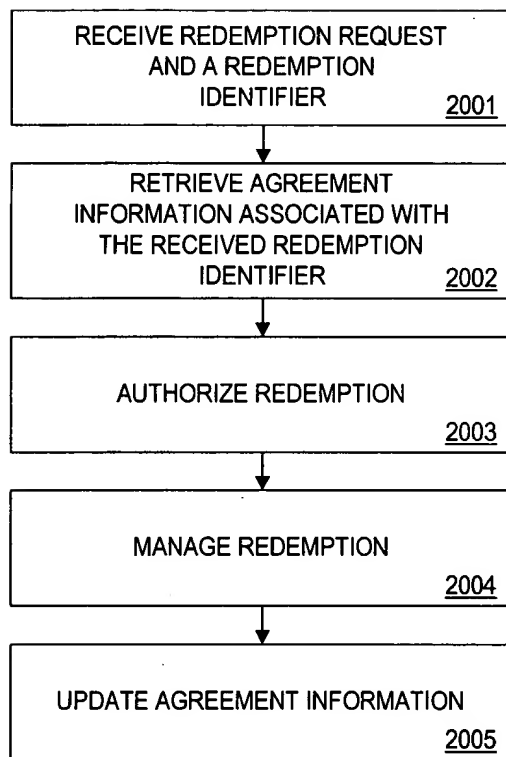


FIG. 20

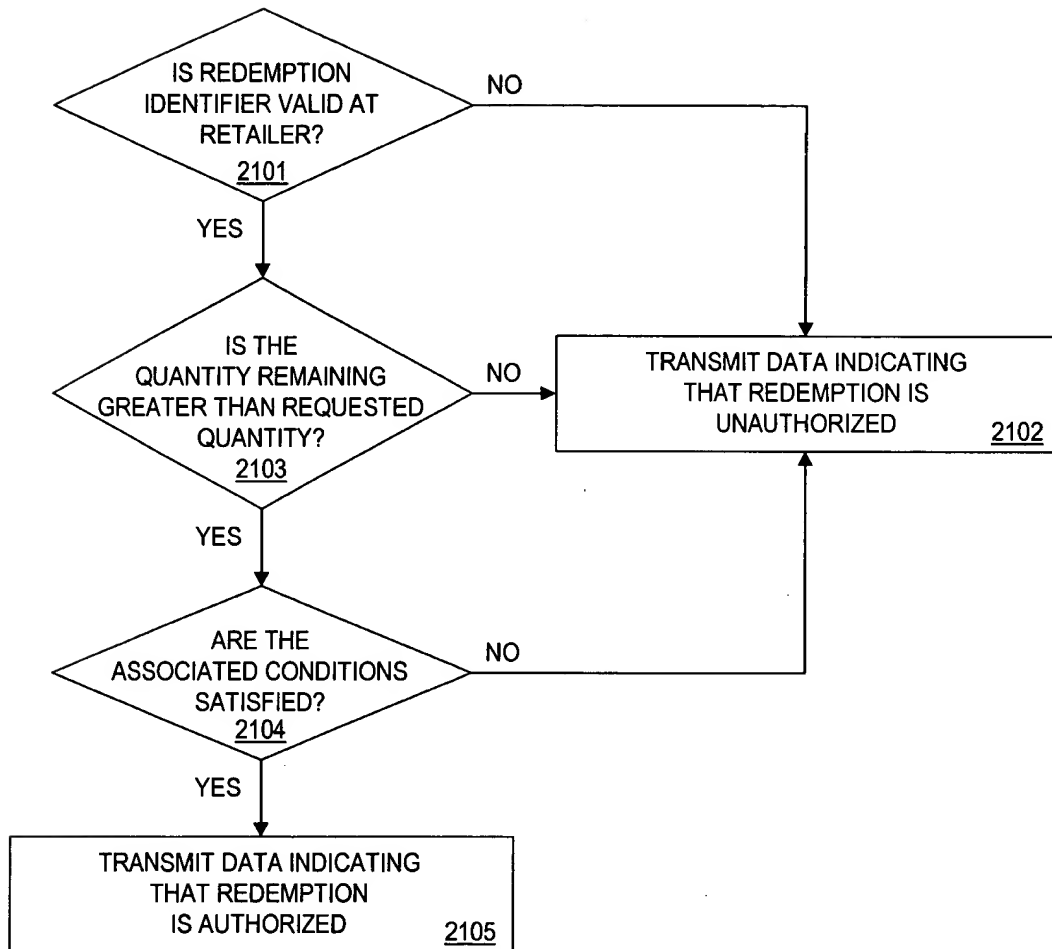


FIG. 21

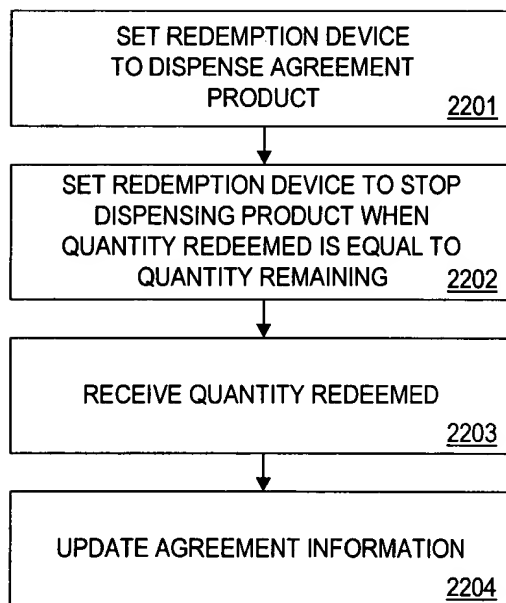


FIG. 22

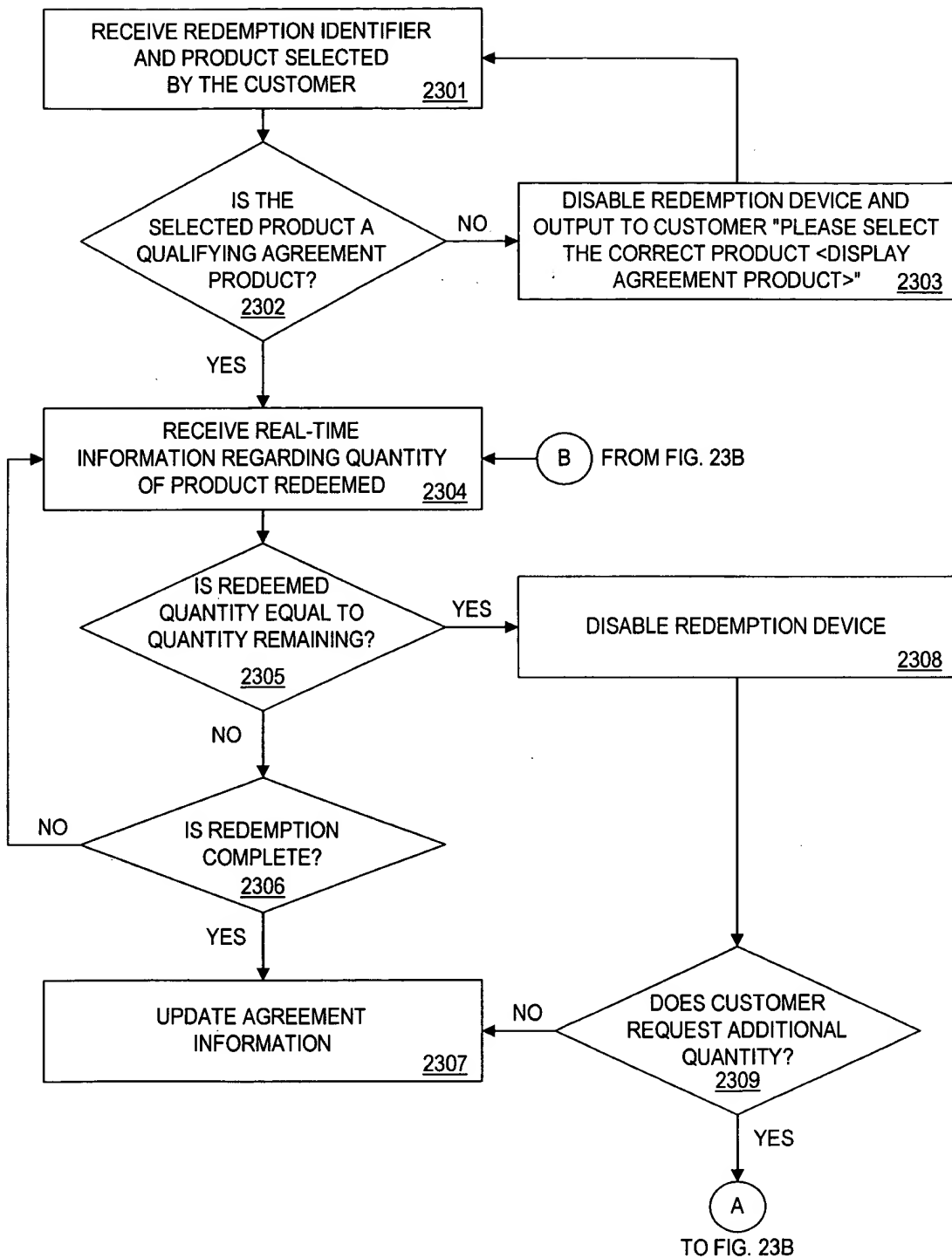


FIG. 23A

OFFICIAL BUSINESS

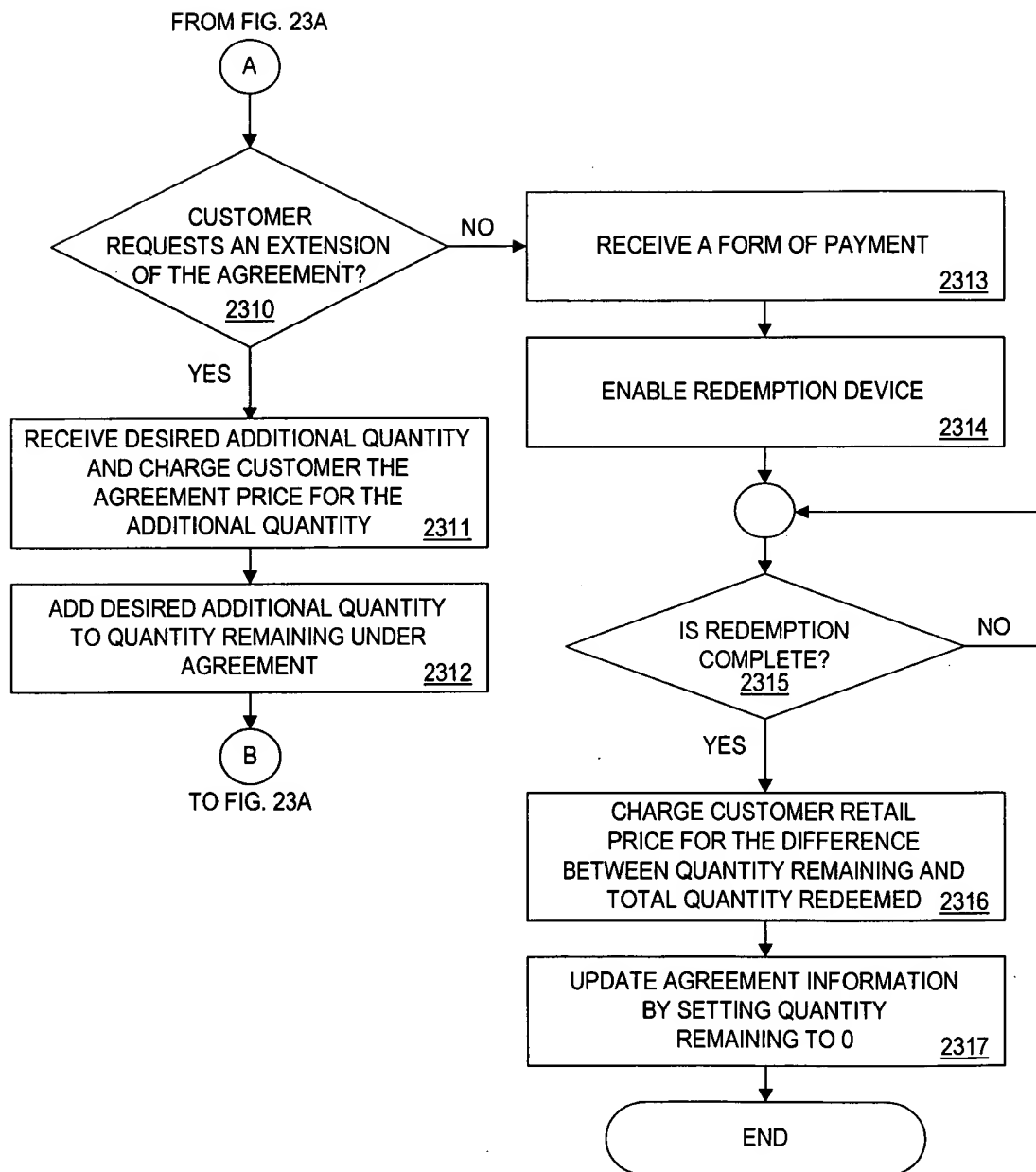


FIG. 23B

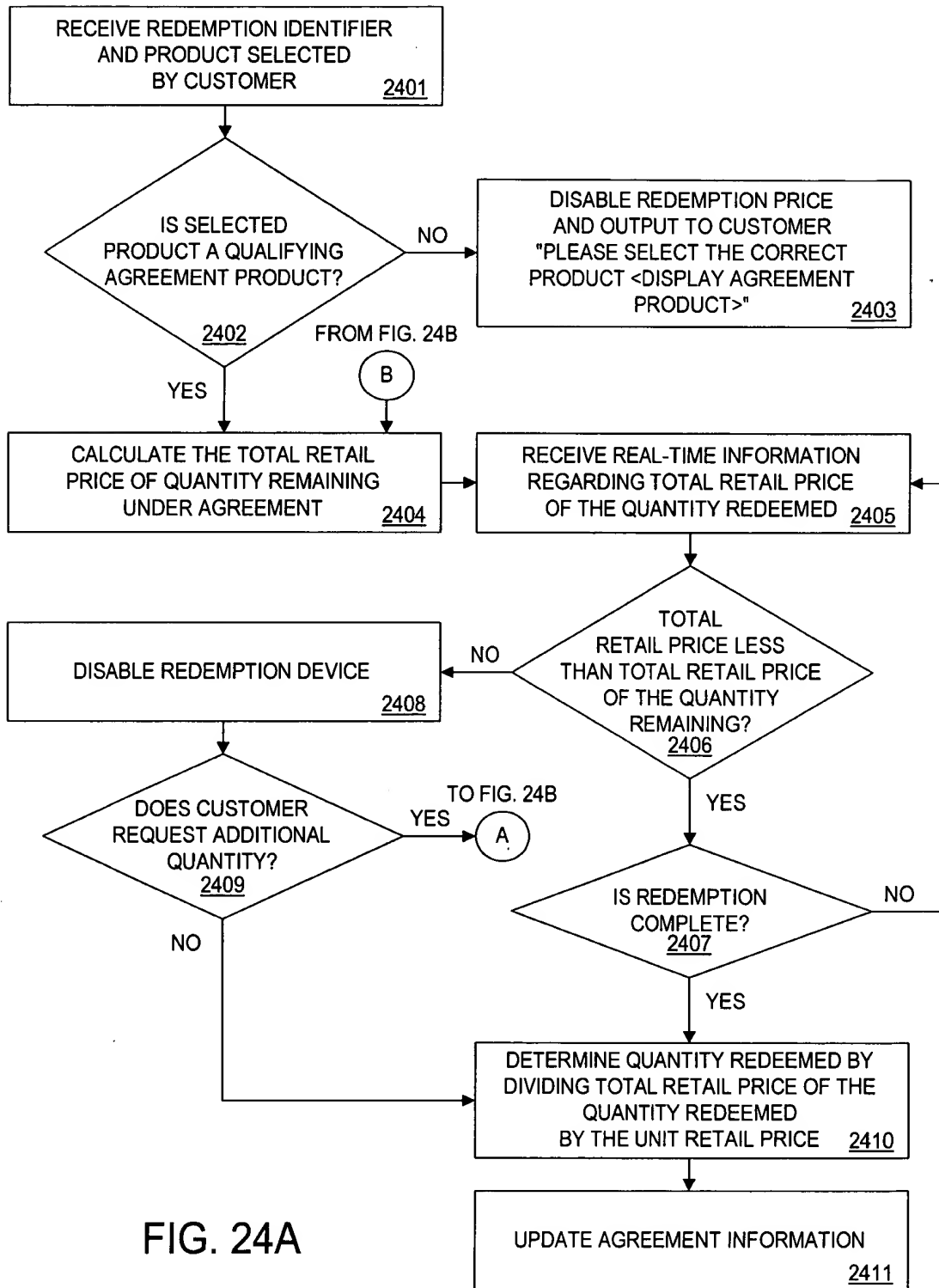
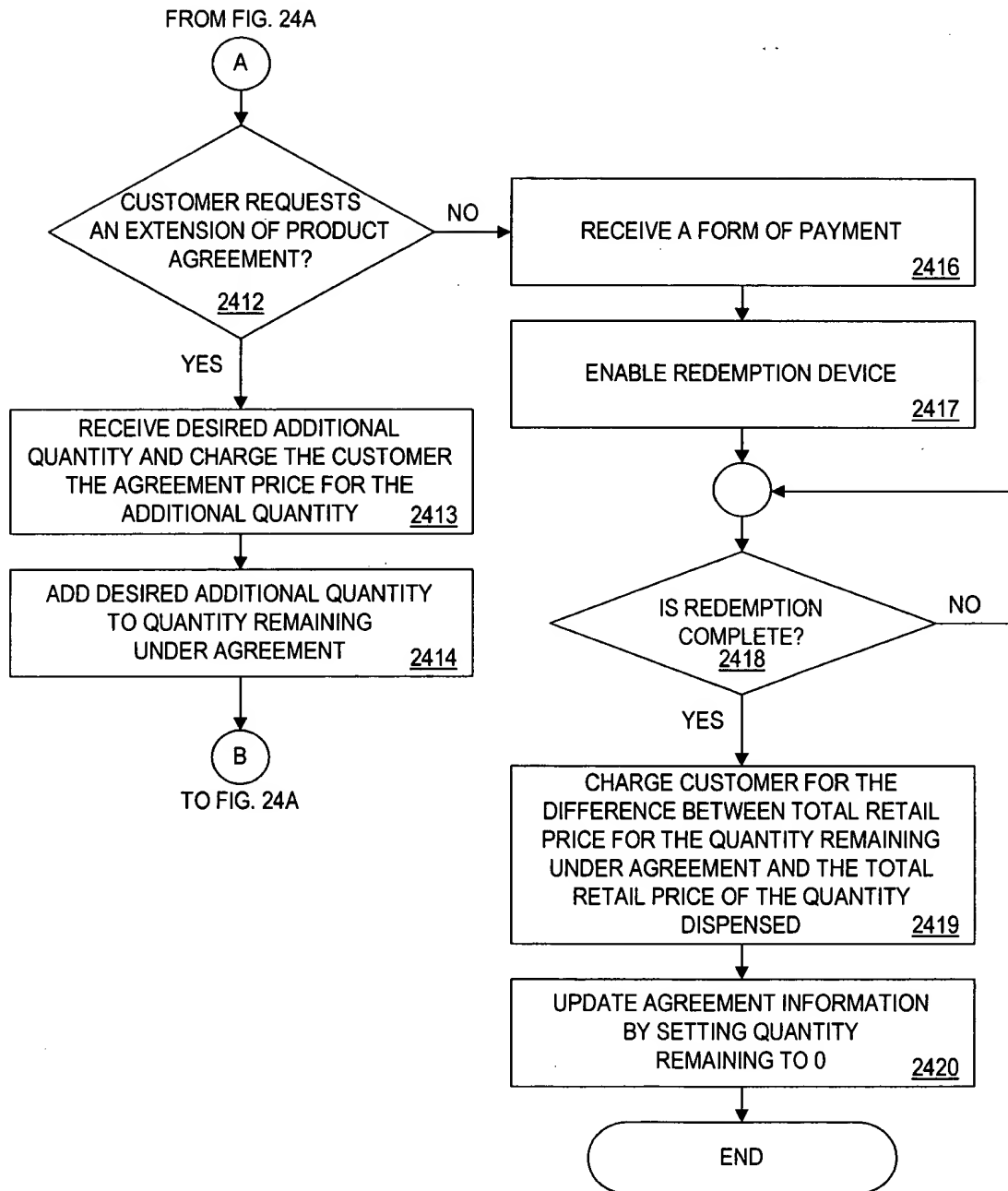


FIG. 24A



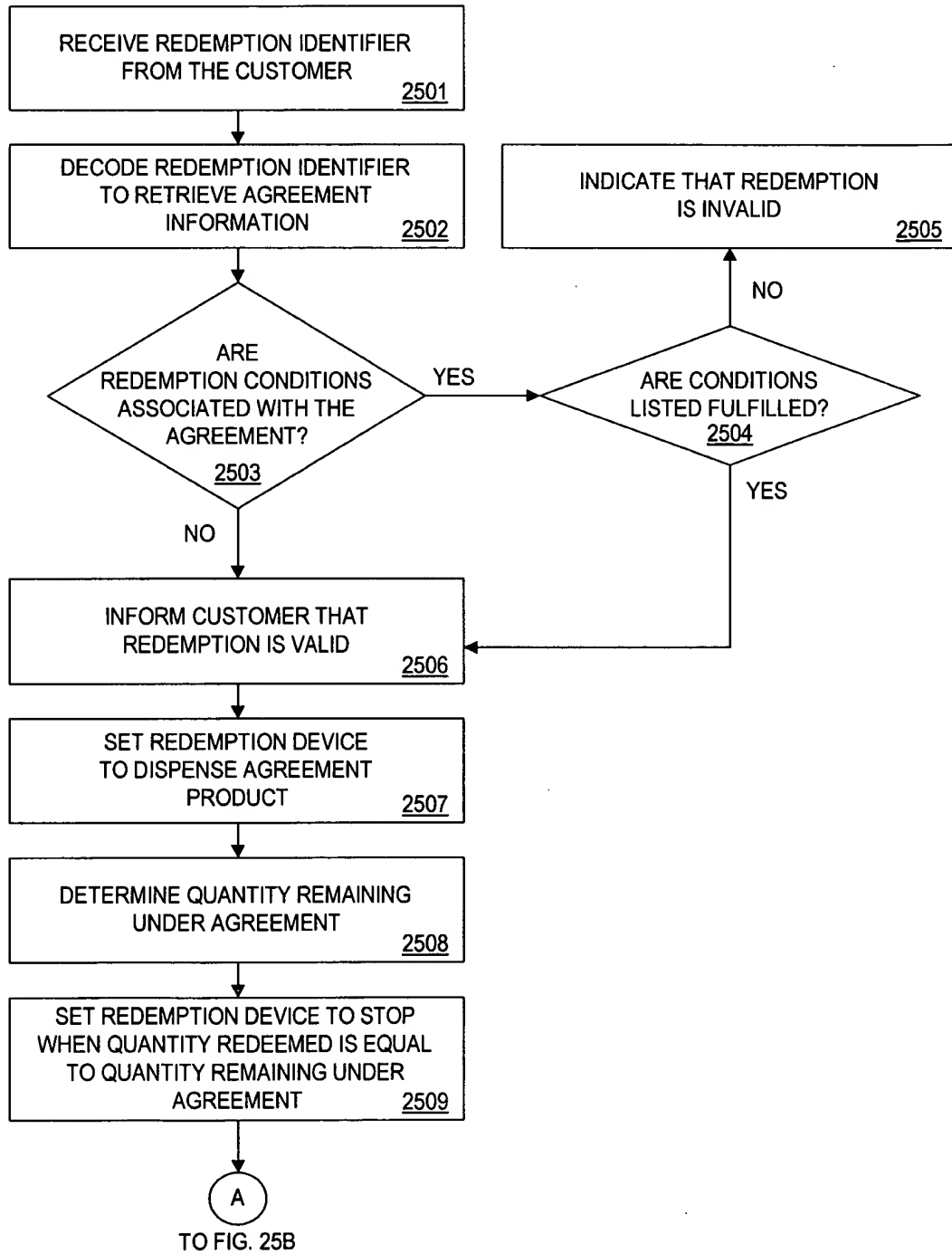


FIG. 25A

FROM FIG. 25A

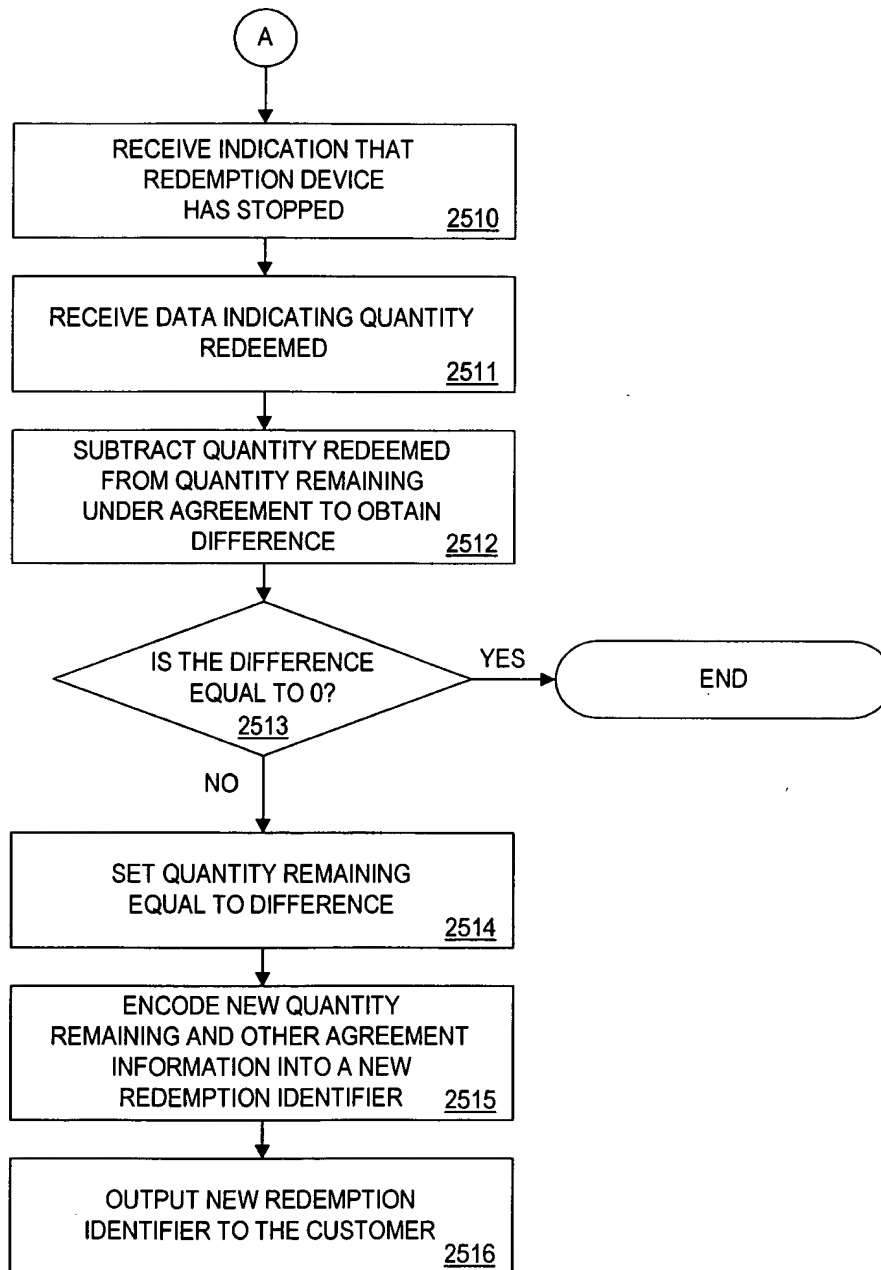


FIG. 25B


```

graph TD
    2601[RECEIVE REDEMPTION RECORD  
FROM RETAILER] --> 2602[RETRIEVE SETTLEMENT  
PRICE CORRESPONDING TO  
THE RETAILER]
    2602 --> 2603[DETERMINE SETTLEMENT DUE RETAILER  
BASED ON THE QUANTITY REDEEMED  
AND THE SETTLEMENT PRICE]

```

FIG. 26

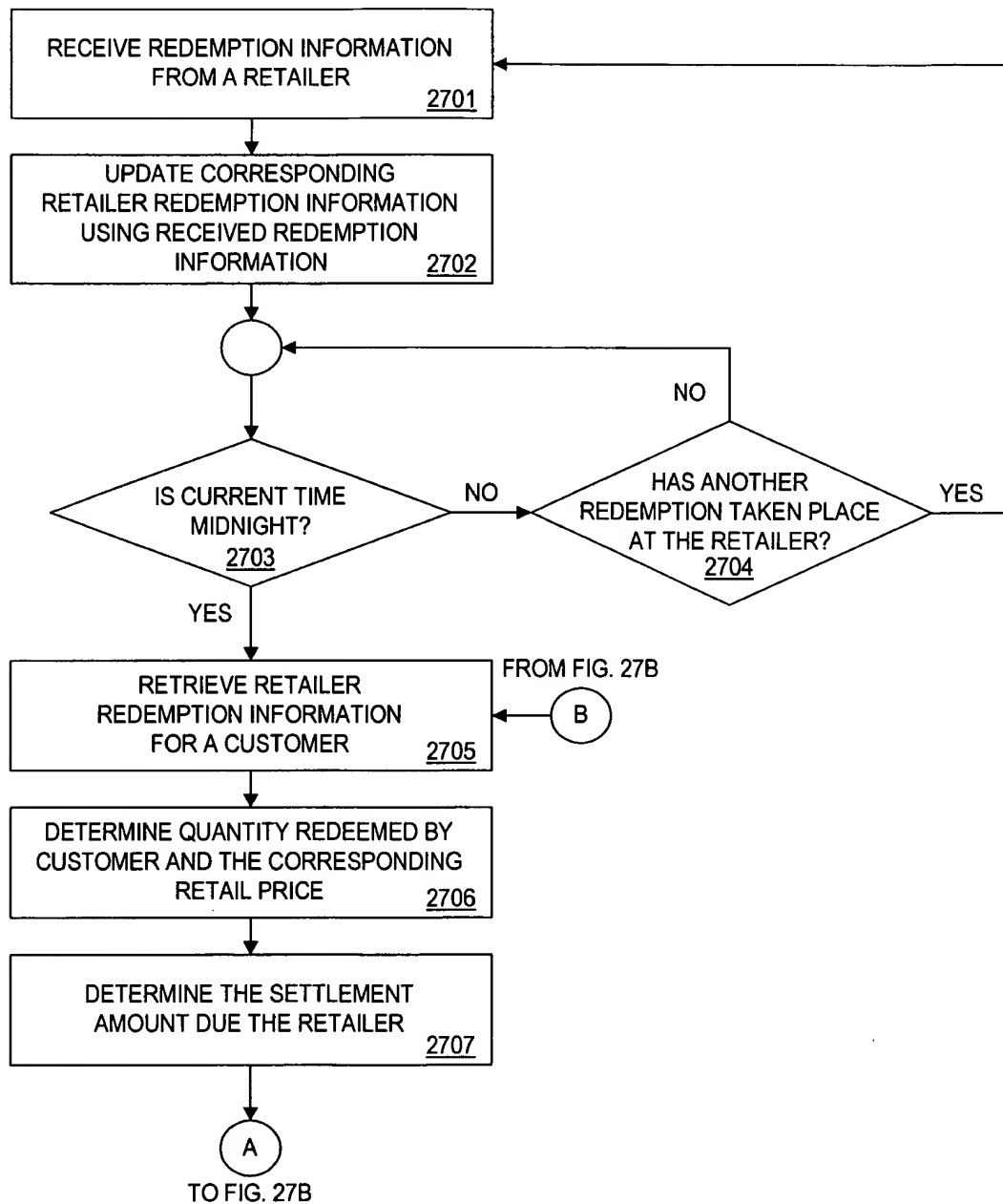
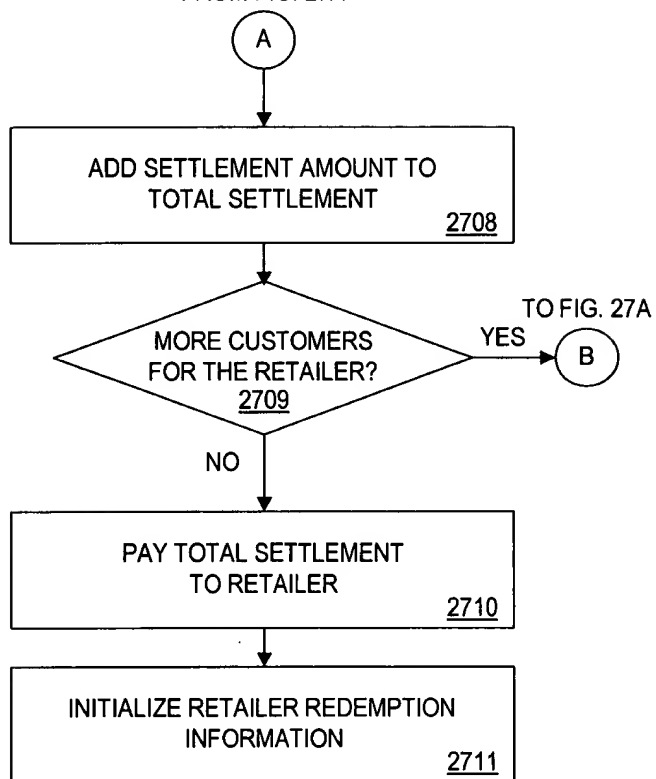


FIG. 27A

FROM FIG. 27A



ADD SETTLEMENT AMOUNT TO
TOTAL SETTLEMENT

2708

**MORE CUSTOMERS
FOR THE RETAILER?**

2709

TO FIG. 27A
YES ☒ B

B

NO

**PAY TOTAL SETTLEMENT
TO RETAILER**

2710

INITIALIZE RETAILER REDEMPTION INFORMATION

2711

FIG. 27B